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Schwartz

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(54) **SYSTEMS AND METHODS OF REMOVING
AND MANAGING HEAVY METALS**

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(58) **Field of Classification Search**

None

See application file for complete search history.

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(57) **ABSTRACT**

Systems and methods remove and manage heavy metals. In
one implementation, an exemplary method can be applied to
food processing and food consumption to remove heavy met-
als such as mercury, lead, uranium and cadmium before
absorption by a living organism. The exemplary method
exposes the food to a heavy-metal binding ligand, such as a
concentrated protein or phytic acid, to form a heavy-metal
chelate, and then allows the chelate to separate from the food.
In another implementation, an exemplary probe possesses
innovative molecular layers on its surface to detect and quan-
tify heavy metals by attracting and binding traces of the heavy
metals on a ligand layer.

8 Claims, 9 Drawing Sheets